

LOS ALAMOS NATIONAL LABORATORY
OVERSIGHT COMMITTEE

REPORT
to the
FORTY-EIGHTH LEGISLATURE,
FIRST SESSION

December 2006
Legislative Council Service

Background of Committee

The Los Alamos National Laboratory Oversight Committee was originally created by the New Mexico Legislative Council in 2002 in response to Senate Joint Memorial 84 of that year. The New Mexico Legislative Council has subsequently re-created the committee in the 2003, 2004 and 2005 interims.

2006 APPROVED WORK PLAN AND MEETING SCHEDULE for the LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE

Members

Rep. Roberto "Bobby" J. Gonzales, Co-Chair
Sen. Phil A. Griego, Co-Chair
Rep. Thomas A. Anderson
Sen. John T.L. Grubestic
Sen. Richard C. Martinez

Sen. William H. Payne
Rep. Jane E. Powdrell-Culbert
Rep. Debbie A. Rodella
Rep. Nick L. Salazar
Sen. William E. Sharer

Advisory Members

Sen. Ben D. Altamirano
Sen. Mary Jane M. Garcia
Sen. Stuart Ingle

Rep. Ben Lujan
Rep. Jeannette O. Wallace

Work Plan

The New Mexico Legislative Council directed all interim committees to focus their efforts this year. The Los Alamos National Laboratory Oversight Committee focused on reviewing the new LANL contract and coordinating with the Radioactive and Hazardous Materials Committee regarding environmental issues arising from lab operations and disposal activities.

Most of the committee discussions focused on the impact of reductions in contractor force at LANL, the relations between LANL and the New Mexico Department of Environment and the consequences of recent security breaches at LANL.

APPROVED MEETING SCHEDULE

May 26 (Santa Fe)

July 6 (Española)

*August 9 (Los Alamos—Joint meeting with RHMC)

*September 18 (Taos)

November 9 (Santa Fe)

*The committee requests two meeting dates different from the ones suggested by the Legislative Council.

TENTATIVE AGENDA
for the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE

May 26, 2006
Room 321, State Capitol

Friday, May 26

10:00 a.m.

Call to Order

—Representative Roberto "Bobby" J. Gonzales, Co-Chair

—Senator Phil A. Griego, Co-Chair

10:15 a.m.

2006 Interim Meeting Schedule and Scope of Work

—Gordon Meeks, Committee Staff

11:00 a.m.

Adjourn

**MINUTES
of the
FIRST MEETING
of the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE**

**May 26, 2006
Room 321, State Capitol**

The meeting of the Los Alamos National Laboratory (LANL) Oversight Committee was called to order at 10:05 a.m. on Friday, May 26, 2006, by Representative Roberto "Bobby" J. Gonzales, co-chair.

PRESENT

Rep. Roberto "Bobby" J. Gonzales, Co-Chair
Sen. Phil A. Griego, Co-Chair
Rep. Thomas A. Anderson
Sen. John T.L. Grubestic
Sen. Richard C. Martinez
Sen. William H. Payne
Rep. Jane E. Powdrell-Culbert
Rep. Debbie A. Rodella
Rep. Nick L. Salazar
Sen. William E. Sharer

ABSENT

Advisory Members

Rep. Jeannette O. Wallace

Sen. Ben D. Altamirano
Sen. Mary Jane M. Garcia
Sen. Stuart Ingle
Rep. Ben Lujan

Staff

Gordon Meeks
Liz Holmes

Guests

The guest list is in the meeting file.

Copies of all handouts and written testimony are in the meeting file.

Friday, May 26

Scope of Work, Meeting Schedule and Itinerary

Gordon Meeks presented the suggested scope of work approved by the New Mexico Legislative Council at its meeting on May 9 and the schedule requested by the council. The council requested the committee to focus on the following topics this interim:

1. the new LANL contract;
2. coordination with the Radioactive and Hazardous Materials Committee regarding environmental issues from lab operations and disposal activities; and

3. coordination with the Information Technology (IT) Oversight Committee on IT security.

The committee discussed the benefit of inviting California legislators to attend a meeting or to have representatives present for one or more meetings of the committee. It was also suggested that the committee include in its agendas spokespersons from the laboratory's procurement office to explain new provisions affecting acquisition of products and services from New Mexico and local vendors and that members of the laboratory's community relations office be invited to participate in meetings. The scope of work as requested by the council was approved without opposition.

The following meeting schedule was approved without dissent:

July 6, Espanola;

August 9, Los Alamos (joint meeting with the Radioactive and Hazardous Materials Committee);

September 21, Taos (joint meeting with the Information Technology Oversight Committee); and

November 9, Santa Fe.

The committee adjourned at 10:20 a.m.

Revised: July 5, 2006

**TENTATIVE AGENDA
for the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE**

**July 6, 2006
Conference Room, AD 101-102
Northern New Mexico College
Española**

Thursday, July 6

- 10:00 a.m. **Call to Order**
—Representative Roberto "Bobby" J. Gonzales, Co-Chair
—Senator Phil A. Griego, Co-Chair
- Welcome to Espanola**
—Mayor Joseph Maestas
- 10:15 a.m. **Los Alamos National Laboratory (LANL) New Contract**
—Dr. Michael Anastasio, Director, LANL
- 11:00 a.m. **LANL Procurement Effects on Northern New Mexico**
—Richard Marquez, Executive Director, Director's Office, LANL
- 12:00 noon **Lunch**
- 1:30 p.m. **Community Outreach Plan**
—Lillian Montoya-Rael, Community Programs Office Leader, LANL
- 2:30 p.m. **Northern New Mexico Math and Science Academy Program**
—Cathy Berryhill, Master Teacher
- 3:30 p.m. **Public Comment**
- 4:30 p.m. **Adjourn**

MINUTES
of the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE
July 6, 2006
Northern New Mexico College
Administration Conference Room

The meeting of the Los Alamos National Laboratory (LANL) Oversight Committee was called to order at 10:12 a.m. on Thursday, July 6, 2006, by Representative Roberto "Bobby" J. Gonzales, co-chair.

Present

Rep. Roberto "Bobby" J. Gonzales, Co-Chair
Rep. Thomas A. Anderson
Sen. John T.L. Grubestic
Rep. Jane E. Powdrell-Culbert
Rep. Debbie A. Rodella
Rep. Nick L. Salazar

Absent

Sen. Phil A. Griego, Co-Chair
Sen. Richard C. Martinez
Sen. William H. Payne
Sen. William E. Sharer

Advisory Members

Rep. Ben Lujan
Rep. Jeannette O. Wallace

Sen. Ben D. Altamirano
Sen. Mary Jane M. Garcia
Sen. Stuart Ingle

Staff

Gordon Meeks
Liz Holmes

Guests

The guest list is in the meeting file.

Copies of all the handouts and written testimony are in the meeting file.

Thursday, July 6

Welcome

President Jose G. Griego of Northern New Mexico College welcomed the committee and thanked the legislature for enacting legislation last year making the college a four-year institution. He said that the first program offering four-year degrees is the teacher education program, which will be followed shortly with six more four-year-degree programs.

Los Alamos National Laboratory New Contract

Dr. Mike Anastasio, director of LANL, thanked the committee for inviting him to make his address. He described his credentials, which include 25 years at Lawrence Livermore National Laboratory (LLNL), four years as director at LLNL and a Ph.D. in nuclear physics. He thanked the legislature for supporting the University of California in the recent laboratory contract competition and made a commitment that Los Alamos National Security (LANS), LLC, intends to be a great corporate citizen. He illustrated that point by mentioning the close

cooperation with Northern New Mexico College through the machinist apprentice program. The federal government's decision to bid the contract to manage the laboratory for the first time in its 63 years of operation is an indication that the government wanted fundamental changes in management, he said. A primary objective is to make operations at LANL more efficient, as well as safer. He explained that he intends to manage the laboratory "in a manner that first seeks to understand the consequences and trade-offs of our business decisions". He told the committee that LANS is comprised of Bechtel National, Inc., the University of California, BWX Technologies and Washington Group International. He said the transition from the old management team to the new one has been successful and that over 96 percent of employees accepted LANS' offers of employment, retaining top scientists, engineers and support staff. This amounted to fewer retirements than last year.

He explained that his vision "is to see that the new organization and leadership team . . . have been assigned responsibility and accountability for execution of programs or functions . . . [and] to do more than identify problems and issues for other managers to handle. My expectation is that the leadership will personally help solve the problem or issue that they identify — that is the job of management". He said that individual employees play a key role in the success of LANL and that every employee is critical to this success. He will be working to integrate the multiple components of the nuclear weapons complex and its many moving parts. Some of his goals are to modernize facilities and weapons systems and develop a flexible and responsive management approach to meet future national security requirements. He wants the business and facility operations of the lab to match its world-class science. He said, to that end, the integration between the laboratory and New Mexico communities is essential, and "we are committed to fostering an excellent relationship with the entire state of New Mexico, especially northern New Mexico".

He addressed safety and security issues and made a commitment to analyze the root causes for recent safety incidents, referring to a hoisting and rigging operation last week that resulted in injuries to two subcontractor employees.

He said that the short-term operational costs have increased because of increased fees, the increased gross receipts tax liability (of about \$50 million) and contributions to new retirement plans. He went on to emphasize that, in the long run, the laboratory will have to find additional efficiencies to maximize the scientific output of the laboratory, which might have implications for employment.

Questions and discussion from the committee addressed:

- potential re-employment of retirees;
- cooperative programs with New Mexico educational institutions;
- the number of students and interns at LANL;
- the status of LANL infrastructure and facilities;
- LANL's counterterrorism program;
- membrane technology being developed at the lab for gas filtration;
- the status of the supercomputer being developed at LANL to be the fastest computer in the world;
- gross receipts tax payment arrangements;
- financial arrangements among the corporate owners of LANS;

- available money for community services;
- details of current employment;
- the amount of procurement from New Mexico businesses;
- environmental compliance;
- the status of the new management team;
- the board of governors;
- LANL's role in missile defense research;
- LANL research in renewable energy;
- collaboration with private industry and technology transfer; and
- the cost and economic impact of new facilities being built in Los Alamos.

LANL Procurement Policies

Richard Marquez, executive director in the Director's Office at LANL, told the committee that LANS will continue the association between the lab and the Business Advisory Committee and the Subcontractor Consortium. He said that a grant pool has been generated with \$100,000 to assist local communities to conduct vendor public information efforts. Dennis Roybal has been recruited as manager of the small business office at the lab. The new contract requires new procurement procedures, and there will be closer federal oversight of the implementation of those procedures. The lab spends up to \$1 billion per year on goods, services and construction. Of that, \$200 million is spent in northern New Mexico. Vendors must be preapproved, and part of the conditions for that preapproval is the fulfillment of safety rules. The new federal procurement rules require that all contracts go out for competitive bidding. There are currently four major subcontractors, but there are as many as 3,000 small subcontractors.

Questions and comments from the committee addressed:

- the federal acquisition regulations as the model for the new LANL procurement rules imposed by the federal government;
- the potential for extension of existing contracts as a sole-source alternative to bidding;
- the cost of subcontractor performance bonds;
- "cycle" time (time between work or service delivery and payment); and
- the consistency of quality standards required of contractors.

Community Outreach

Lillian Montoya-Rael, community programs office leader, described the community commitment plan to the committee. She said the LANS team is committed to benefiting northern New Mexico communities. She described the seven-year community commitment plan as an investment by the laboratory in northern New Mexico. The plan is based on three prongs: education, economic development and charitable giving. A consistent, responsive relationship with neighboring communities is the commitment. She said that LANS will build a partnership with each constituency that will be a dynamic balance of listening and action and will establish formal metrics for performance, including annual surveys and formal feedback loops to verify alignment with community needs and priorities. LANS' investment mix includes direct community investments targeted to the critical areas, investments from the "earned incentive fee" and in-kind and other community investments. LANS plans to make new education, economic development, community giving and in-kind community investments in addition to the

existing LANL regional initiatives, regional purchasing commitments and technology transfer efforts. She mentioned conduits for delivery of these commitments, including the business advisory council, the consortium of major subcontractors, small business outreach and regional procurements, technology commercialization, technical assistance and donation of excess equipment and property to communities. Education sponsorships include student internships, the Math and Science Academy, the Science on Wheels Program, tribal education initiatives and workforce pipeline efforts.

Questions and discussion from the committee addressed:

- LANL's yearly financial commitment of \$14 million for community giving;
- how the LANL Foundation is a separate source of community giving;
- communities LANL considers to be in its sphere of community giving;
- incentives for employees to participate in technical assistance;
- criteria for grant program and decision-makers for grants;
- direct investment contracts; and
- the role of the Technology Transfer Division at the laboratory.

Math and Science Academy

Cathy Berryhill, Carol Brown and Lorenzo Gonzales, master teachers of the academy, told the committee that the academy started with a donation from LANL in 2000 with 12 teachers participating in the program. The program is a teacher education program that helps elementary and middle school teachers improve their teaching skills to foster attention and interest by their students in math and science. Since its inception, average test scores have shown a significant improvement in the schools that have had teachers go through the program. Seventy-eight teachers have gone through the program to date, and 74 teachers are participating this year. The laboratory pays the costs of master teachers who provide the continuing education curriculum to participating teachers, and local school districts and the state legislature have covered the costs of the participating teachers.

The master teachers said that the academy asks for a commitment by the principals of the schools where teachers have applied for the program and asks the participating teachers for a three-year commitment. The master teachers also follow up by coaching participating teachers and visiting their classrooms to see how well the program is translating into the classroom experience. They said that the Math and Science Academy is aligned with the federal No Child Left Behind Act. There is a need to reform teacher education programs at four-year colleges if this kind of program is to be expanded to all K-12 schools. To that end, the academy has a relationship with the Education Department at New Mexico State University. The cost is \$3,800 per teacher, compared to \$7,800 for a master's degree program in the conventional curriculum, so it is a bargain considering the success of the students of the participating teachers.

Before the question and answer session, the master teachers introduced three teachers who had participated in the program. Lisa Randall from Taos, Mae LaBella from Taos and Yanira Vasquez enthusiastically endorsed the program and described their experiences in the training as career-changing.

Questions and discussion by the committee addressed:

- participation and support by school administrators;

- the need for alternative methods of measuring success;
- the impact on student behavior;
- the cause of progress up to certain grade levels and then apparent drop off in performance results by students;
- the lack of participation by Pecos and Las Vegas;
- the need for all school districts and the Public Education Department to incorporate this curriculum statewide; and
- how to replicate and expand the Math and Science Academy curriculum statewide.

The committee adjourned at 3:30 p.m.

Revised: August 8, 2006

**TENTATIVE AGENDA
for the
JOINT MEETING
of the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE
and
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE**

**August 9, 2006
Conference Center Room 203, Los Alamos Research Park
Los Alamos**

Wednesday, August 9

- 9:00 a.m. **Call to Order**
—Representative Roberto "Bobby" J. Gonzales, Co-Chair, LANL
—Senator Phil A. Griego, Co-Chair, LANL, and Chair, RHMC
- Welcome to Los Alamos**
—Mike Wheeler, Chair, Los Alamos County Council
- 9:30 a.m. **Overview of the National Nuclear Security Administration's
Environmental Impact Statement for LANL**
—Elizabeth Withers, National Environmental Policy Act Compliance
Officer, Department of Energy
- 10:30 a.m. **Environmental Program Overview**
—Andrew Phelps, Associate Director for Environmental Programs, LANL
- 11:00 a.m. **Update on Consent Order Compliance**
—Gordon Dover, Program Director for Corrective Actions, LANL
—David McInroy, Deputy Program Director for Corrective Actions,
LANL
—James Bearzi, Bureau Chief, Hazardous Waste Bureau, NMED
- 12:00 noon **Working Lunch**
Ground Water Conceptual Model at LANL
—Dr. Ardyth Simmons, Program Manager, LANL
- 1:00 p.m. **Chromium Interim Measures Plan**
—Daniel Katzman, Program Manager, LANL
- 2:00 p.m. **NMED Update on LANL Issues**
—James Bearzi, Bureau Chief, Hazardous Waste Bureau, NMED
- 3:00 p.m. **Status of WIPP Shipments**
—Gerald O'Leary, Program Director for Transuranic Waste Disposition,

LANL

3:45 p.m. **Technical Area 21 Remediation Plan and Schedule Waste Disposal Scenarios**
—Allan Chaloupka, Program Director for Technical Area 21 Closure, LANL
—William Criswell, Deputy Program Director for Technical Area 21 Closure, LANL

4:45 p.m. **Public Comment**
Adjourn

MINUTES
of the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE
and the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE
August 9, 2006
Conference Room
Los Alamos Research Park

The joint meeting of the Los Alamos National Laboratory (LANL) Oversight Committee and the Radioactive and Hazardous Materials Committee was called to order at 9:12 a.m. on Wednesday, August 9, 2006, by Representative Roberto "Bobby" J. Gonzales, co-chair.

LANL Oversight Committee

Present

Rep. Roberto "Bobby" J. Gonzales, Co-Chair
Sen. Phil A. Griego, Co-Chair
Rep. Thomas A. Anderson
Sen. John T.L. Grubestic
Sen. Richard C. Martinez
Sen. William H. Payne
Rep. Jane E. Powdrell-Culbert
Rep. Debbie A. Rodella
Rep. Nick L. Salazar

Absent

William E. Sharer

Advisory Members

Rep. Ben Lujan
Rep. Jeannette O. Wallace

Sen. Ben D. Altamirano
Sen. Mary Jane M. Garcia
Sen. Stuart Ingle

Radioactive and Hazardous Materials Committee

Present

Sen. Phil A. Griego, Chair
Rep. John A. Heaton, Vice Chair
Rep. Donald E. Bratton
Sen. John T.L. Grubestic
Sen. Carroll H. Leavell
Sen. Richard C. Martinez
Rep. Jim R. Trujillo
Rep. Jeannette O. Wallace

Absent

Sen. Vernon D. Asbill
Rep. Manuel G. Herrera
Sen. Gay G. Kernan
Rep. Antonio Lujan

Advisory Members

Rep. Thomas A. Anderson
Sen. William H. Payne
Rep. Nick L. Salazar

Sen. Mary Jane M. Garcia
Sen. Clinton D. Harden, Jr.
Sen. John Pinto

Staff

Evan Blackstone
Gordon Meeks
Liz Holmes

Guests

The guest list is in the meeting file.

Copies of all the handouts and written testimony are in the meeting file.

Wednesday, August 9

Welcome

The committees began by introducing themselves and staff to the audience. Mike Wheeler, chair of the Los Alamos County Council, welcomed the committees.

Overview of the National Nuclear Security Administration's Environmental Impact Statement for LANL

Elizabeth Withers, National Environmental Policy Act compliance officer for the Department of Energy at LANL, told the committee that the first Los Alamos sitewide environmental impact statement (EIS) was issued in 1979, the second in 1999 and now the third is in progress. She said that in 2004, the lab concluded that there was a need for a supplemental statement, and the current EIS is in response to that conclusion. A draft document was issued on July 7 and a public comment period will close 75 days later, on September 20. There will be public hearings in Los Alamos, Espanola and Santa Fe during that period.

The lab has also conducted briefings for the affected pueblos and the congressional delegation. Examples of some of the public comments received on the EIS address the plutonium pit production alternatives and the construction of parking lots at either end of Pajarito Road. Pits are the trigger mechanisms for nuclear bombs and theoretically may lose their viability over time, thus compromising the stockpile of nuclear weapons. Therefore, these pits need to be replaced periodically. She said that all of the public comments will be published with the final EIS and the record of decision.

Questions and comments from the committees addressed:

- additional space required for increased pit production;
- the current number of certified pits and the effect on national security of low production levels;
- why the decision on pit production has been delayed;
- the status of legacy waste and its inclusion in the EIS;
- employment levels at LANL according to the alternatives in the EIS;
- the length of the public comment period; and
- the level of gross receipts taxes LANL is expected to be subject to and their impact on employment at the lab.

Environmental Program Overview

Andy Phelps, associate director for environmental programs at LANL, provided the committees with an overview of LANL's environmental programs. His presentation covered LANL's new organizational structure, its strategic intent, operational successes and sustainable solutions.

Mr. Phelps highlighted one aspect of LANL's new contract: it has brought new people into the lab from around the country and internationally. He stated that the lab's strategic intent

includes ensuring public safety, accelerating cleanup and increasing transparency with the public. With regard to accelerating cleanup, Mr. Phelps summarized that LANL is meeting deadlines set by the federal consent order, working to remediate chromium contamination and working to get the public engaged in the cleanup process. He said that LANL is focused on becoming a model environmental steward for the community and the state. The lab strives for transparency, engaging in a mutually supportive relationship with the New Mexico Department of Environment (NMED), accepting and respecting the NMED's regulatory authority and seeking greater public input on LANL's high-level goals and objectives. Mr. Phelps emphasized that LANL is working with the NMED to improve the timeliness of communications with the public so that there is accountability for taxpayer investment in the facility. He went on to state that LANL is improving its effectiveness and efficiency by bringing in new expertise that has a history of performance and innovation.

Mr. Phelps also summarized for the committees the current issues being addressed by LANL that have impacts on its environmental programs. These include dealing with chromium contamination, meeting goals for transuranic (TRU) waste disposal, achieving stability in LANL's funding, conducting effective ground water monitoring and building public confidence. Mr. Phelps concluded his presentation by reviewing various goals for its environmental programs, including waste operations, water stewardship, TRU waste disposition, radioactive liquid waste and corrective actions.

Questions and comments from the committees addressed:

- the presence of the NMED at sites during physical cleanup and LANL's willingness for transparency;
- the cost to the state for remediation activities at LANL and the cost borne by the federal government;
- LANL's notification to local responders and communities through which TRU waste is transported;
- prioritization of sites for cleanup;
- the membership composition of the citizen's advisory board;
- the total cost of cleanup activities;
- the NMED budget and staffing adequacy and its working relationship with LANL;
- appreciation of LANL's work and employment of northern New Mexicans; and
- the amount of hazardous waste remaining at LANL.

Committee Business

Minutes of the previous meetings of both committees were approved without opposition.

Update on Consent Order Compliance

James Bearzi, Hazardous Waste Bureau chief for the NMED, began by briefly reviewing the federal consent order on environmental remediation and cleanup at LANL. He explained that the consent order covers the cleanup of certain types of hazardous waste, including contaminants such as metals and solvents but not radioactive waste. The purpose of the consent order is to prioritize contamination investigation activities, provide minimum investigation requirements and prescribe cleanup levels and schedules for work plan submittals, reporting and remedy completions.

Gordon Dover, LANL program director for corrective actions, provided the committees with an overview and status update of LANL's environmental remediation program. He explained that the program is aimed at ensuring compliance with the consent order and investigating and completing risk-based remediation of historically contaminated sites. Mr. Dover stated LANL is working closely with the federal Department of Energy (DOE) and the NMED to ensure that appropriate priorities and approaches are being addressed. He went on to describe the types of sites and contamination targeted for cleanup by the program. The sites include landfills, wastewater management systems and contamination resulting from past and present LANL operations. The types of contamination include chemical, heavy metals, radioactive constituents, high explosives and degradation products. After 2,124 potential release sites were identified in 1989, today 760 sites remain with work in progress. Mr. Dover informed the committees that he thinks most of those remaining sites will require little or no action. He said that probably 100 sites will require cleanup while 180 sites cannot be remediated until certain laboratory activities are shut down.

Dave McInroy, deputy program director for corrective actions, summarized LANL's progress in implementing the consent order. He stated that LANL has met all regulatory deliverables; two extension requests were made to the NMED as a result of unforeseen field conditions and one enforcement action was issued. Mr. McInroy emphasized that the NMED staffing levels need to be aligned with the workload required by the consent order and that LANL provided \$1.4 million in supplemental funding to the NMED to help remedy the problem. Mr. McInroy went on to review LANL's field activity and deliverable accomplishments for 2006. He also reviewed LANL's consent order implementation plan for 2007, which includes characterization activities at five material disposal areas and sediment contamination investigations in four major canyon systems.

Mr. Bearzi described some of the difficulties the NMED faces in meeting deadlines set by the consent order. He said that in a two-month period, the NMED received 66 documents from LANL that required a response from the NMED. Because some of the documents are voluminous and complicated and the NMED has five employees to review them, the NMED has reviewed and responded to only 31 of the documents. Mr. Bearzi went on to state that the NMED's budget expansion for additional employees approved in the last legislative session as well as working to prioritize data may help to alleviate the workload dilemma for the NMED.

Questions and comments from the committees addressed:

- the remediation of sites with high explosives;
- the effect of the state's regulations on effective cleanup and LANL's other responsibilities;
- how LANL deals with flash residue from certain sites;
- the potential dangers that the City of Santa Fe faces from contamination at the lab;
- whether delays at the NMED are causing delays in actual cleanup;
- ground water and surface water monitoring;
- the names of contractors that are doing actual cleanup;
- providing the committees with the performance reports that the NMED gives to the Legislative Finance Committee; and
- looking at contamination at other federal facilities in New Mexico in addition to LANL.

Ground Water Conceptual Model

Dr. Ardyth Simmons, program manager at LANL, described for the committees ground water modeling of the Pajarito Plateau. She explained the differences between the alluvial ground water, the vadose zone and the regional aquifer and the purpose of the modeling effort in relation to each. She went into technical detail regarding the development of the models using deep well drilling, taking hydrologic measurements and analyzing the data and interpreting the results.

She provided graphics that depict the relationship between sources of water, how contamination may flow through a water table, the lateral spreading of contamination, the kind of enhanced infiltration that occurs in certain geologic formations and the speed of water flow in different formations. Empirical data and the model show that ground water flows rapidly in alluvial deposits where some contaminants are rapidly flushed into the vadose zone but other contaminants are slower moving. She explained that contaminants move slowly from dry mesas and canyons, but that they move faster in wet canyons. In canyon bottoms, contaminants move through the formations in a few decades, but the movement takes thousands of years from dry mesa tops. She also gave general estimates of speeds of contaminant transport and infiltration rates through other geologic strata and conditions. Municipal wells have a measurable effect on water levels; hence, the need for continued ground water quality monitoring.

Questions and comments from the committees addressed:

- differences in contaminant levels as a function of elevation;
- recharge factors and speed of lateral transfers;
- the use of isotope tracers;
- colloidal effects;
- wells as pathways of contamination; and
- the influence of wells on ground water flow.

Chromium Interim Measures Plan

Daniel Katzman, program manager at LANL, testified that chromium contamination found in Los Alamos is from a power plant, which used chromium in its cooling water to inhibit corrosion of the plant's cooling towers. There are no impacts associated with the discovery of the chromium, he said. This contamination is historic and no current operations are releasing chromium. Chromium use was terminated in the 1970s because records indicate operators recognized potential health impacts. Two hundred thousand to 300,000 pounds of chromium were released from Sandia Canyon Technical Area 3. The wetland created by lab operations is probably contaminated, he said, and White Rock Canyon Springs might show some chromium contamination in the future.

The lab is now actively monitoring for chromium and is prepared to take necessary action when and if a water well may be threatened by imminent chromium contamination. A new monitoring well will be installed near the PM 3 production well to detect any imminent threat. Different protocols are being explored for protection of the water quality from production wells. He told the committees that the NMED has approved LANL's work plan to deal with the situation. Drilling of the monitoring well will begin in a week, and a report will be issued in November.

Questions and comments from the committees addressed:

- the threshold for hazardous concentration of chromium;
- regulatory standards for chromium contamination;

- the history of power plant usage of chromium in cooling water;
- the location of the monitoring well; and
- toxic effects of chromium.

NMED Update on LANL Issues

Cindy Padilla, director of the NMED's Water and Waste Management Division, began by explaining the development of the NMED's relationship with LANL and the NMED's role as a regulator. She stated that she welcomes the new management at LANL and its efforts to strengthen the relationship with the NMED. Ms. Padilla then introduced the NMED staff that work on oversight at LANL and highlighted that the relationship is a good one. She also informed the committees that funding for oversight is a challenge every year.

James Bearzi, Hazardous Waste Bureau chief for the NMED, summarized for the committees the NMED's organizational structure and the oversight and regulatory duties of the NMED divisions and bureaus with regard to LANL. Mr. Bearzi reviewed NMED's roles, duties and activities for regulation of safe drinking water, air quality, federal DOE oversight, surface water quality, ground water quality and hazardous waste management. Senator Phil A. Griego, chair of the Radioactive and Hazardous Materials Committee, requested that Mr. Bearzi inform the committee of the specific issues that the legislature can address with regard to the relationship between the NMED and LANL. Mr. Bearzi stated that meeting the requirements of the consent order is difficult due to the complexity and scope of the order and the NMED's limited staff. However, the memorandum of agreement between the NMED and the DOE, he said, in addition to the legislature's approval in 2006 of additional employees for the NMED's Hazardous Waste Bureau will probably help to solve some problems. Mr. Bearzi pointed out that the legislature approved an expansion from five full-time employees to 10, but that the Hazardous Waste Bureau currently has seven employees. Two positions are being advertised and one employee is being transferred to the bureau.

Mr. Bearzi emphasized that it is difficult to make requests of the legislature for assistance for the NMED in 2007 because it remains to be seen how 10 full-time employees for the bureau may increase the NMED's ability to meet the consent order's requirements. He said that the passage of legislation in 2006 endorsed by the Radioactive and Hazardous Materials Committee that allows voluntary fee agreements is helpful, but the legislature needs to keep an eye on how effective the new full-time employees for the Hazardous Waste Bureau will be in the future.

Questions and comments from the committees addressed:

- funding for the NMED's general operations statewide; and
- the specific performance needs of the NMED relative to the compliance order.

Status of Waste Isolation Pilot Plant (WIPP) Shipments

Gerald O'Leary, program director for transuranic waste TRU disposition, informed the committees that LANL's mission for its TRU Waste Disposition Project is to accelerate the retrieval, characterization and shipment of approximately 50,000 drum equivalents of TRU waste from LANL to WIPP by 2010. He explained LANL's TRU waste operations for Technical Area 54 or "Area G", which has been used for disposal of radioactive waste since 1957. Mr. O'Leary also described the TRU waste simplified process flow in which LANL prescreens the TRU waste in order to characterize it before shipping the waste to WIPP.

The current 2006 shipping status for the TRU waste disposition project, Mr. O'Leary stated, is 91 shipments totaling 2,046 containers. He went on to say that the project faces a number of challenges in the future, including an aggressive completion schedule, dealing with aging facilities that do not meet certain safety standards and other resource and technical challenges. Mr. O'Leary concluded by highlighting that the biggest challenge is the sequencing of retrieval, characterization and shipping and environmental restoration activities.

Questions and comments from the committees addressed:

- the recharacterization of LANL TRU waste.

Technical Area 21 Remediation Plan and Schedule Waste Disposal Scenarios

Allan Chaloupka, program director for Technical Area 21 closure, and William Criswell, deputy program director, explained to the committees that LANL's mission regarding Technical Area 21 is to complete the consent order by remediation and corrective actions in a safe and compliant manner, including demolition. They said that Technical Area 21 was one of the original plutonium processing facilities at the laboratory, built shortly after World War II.

The status of the buildings at this location is: the Delta Prime-West buildings have been deactivated and have little current risk; the Delta Prime-East buildings are now completing their mission; and material disposal areas (MDAs) are in various stages of corrective action, material removal or abandonment. The largest volume of waste is assumed to be low-level radioactive waste, according to Mr. Chaloupka and Mr. Criswell. This waste will be disposed of on both on-site and off-site waste facilities. Hazardous and mixed wastes will be shipped to permitted off-site facilities in Utah, Texas and Nevada, and remaining industrial wastes will be disposed of at licensed in-state facilities. Technical Area 21 is expected to be closed and cleanup completed by 2011.

Questions and comments from the committees addressed:

- the status of contamination cleanup in the canyons of Los Alamos; and
- when cleanup planning started (10 years ago), at which time funding constraints delayed the full cleanup schedule.

The committee adjourned at 4:50 p.m.

TENTATIVE AGENDA
for the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE

September 18, 2006
Taos Library Meeting Room
402 Camino de la Placita
Taos

Monday, September 18

10:00 a.m. **Call to Order**

- Representative Roberto "Bobby" J. Gonzales, Co-Chair
- Senator Phil A. Griego, Co-Chair

Welcome to Taos

- Mayor Bobby Duran

10:30 a.m. **Small Business Development Support**

- Dennis Roybal, Manager, Small Business Program, Los Alamos National Laboratory (LANL)

11:30 a.m. **Lunch**

1:00 p.m. **LANL Next Generation Material Science for Alternative Energy**

- William Tumas, Program Manager and Director, Institute for Hydrogen and Fuel Cell Research, LANL

2:30 p.m. **Kit Carson Electric Cooperative Alternative Energy Plan**

- Luis Reyes, CEO, Kit Carson Electric Cooperative

4:00 p.m. **Adjourn**

**MINUTES
of the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE**

**September 18, 2006
Taos Library
Taos**

The meeting of the Los Alamos National Laboratory (LANL) Oversight Committee was called to order at 10:22 a.m. on Monday, September 18, 2006, by Representative Roberto "Bobby" J. Gonzales, co-chair.

Present

Rep. Roberto "Bobby" J. Gonzales, Co-Chair
Rep. Thomas A. Anderson
Sen. John T.L. Grubestic
Rep. Jane E. Powdrell-Culbert
Rep. Nick L. Salazar

Absent

Sen. Phil A. Griego, Co-Chair
Sen. Richard C. Martinez
Sen. William H. Payne
Rep. Debbie A. Rodella
Sen. William E. Sharer

Advisory Members

Rep. Jeannette O. Wallace

Sen. Ben D. Altamirano
Sen. Mary Jane M. Garcia
Sen. Stuart Ingle
Rep. Ben Lujan

Staff

Gordon Meeks
Lindsey Bilovesky

Guests

The guest list is in the meeting file.

Monday, September 18

LANL Small Businesses Development Support

Dennis Roybal, manager of the Small Business Program at LANL, told the committee he has been in procurement for 28 years. He gave some background on the laboratory's history and said that LANL has a goal of increasing the amount of its contracts with small businesses from 41 percent to 50 percent of total procurement. He said the regional preference program is aimed at small businesses in the seven counties and regional pueblos nearest Los Alamos.

Mayor Bobby Duran entered the meeting room, and Representative Gonzales introduced him. The mayor welcomed the committee to Taos and spoke about a Municipal League meeting earlier. Representative Gonzales complimented him and then spoke about Taos events, problems with roadway capacity and the effect of high gas prices on tourism in the area.

Mr. Roybal resumed his presentation, speaking about the lab's vision, mission, the operating procedures of his office and last year's goals for small business contracting. He then introduced Vangie Trujillo, manager of the Intertribal Small Business Initiative. He called the

committee's attention to the business resource guide published by LANL and the Business Advisory Council.

Questions and discussion from the committee included:

- the 8A Small Business Administration certification;
- the effect of an anticipated \$175 million budget shortfall on the procurement of small business services;
- guarantees for Native American programs;
- forecasting methods for predicting potential employee reductions;
- disadvantaged programs;
- just-in-time contracts;
- the Kellogg grant;
- special assistance for Native Americans;
- procurement focus on northern New Mexico;
- prioritization of minority preference contracts;
- progress in meeting the small business contract goals;
- contracting for warehousing; and
- quantification of the economic impact on the seven northern New Mexico counties.

Representative Gonzales introduced some more dignitaries from the town of Taos and from the Kit Carson Electric Cooperative.

LANL Next Generation Material Science for Alternative Energy

William Tumas, program director of the Science Program Office: Alternative Energy and Infrastructure; the Energy Efficiency and Renewable Energy Programs; and the Electricity Delivery and Energy Reliability Programs at LANL, told the committee that the lab's national security mission is an alternative energy mission. He explained that a safe, reliable and predictable energy supply is a critical national security issue. LANL is studying energy conservation in the areas of energy production, transmission and use. He told the committee that energy consumption in the United States will double by the year 2050. He said that transportation is responsible for one-third of greenhouse gases and one-half of imported oil. LANL is involved in research on superconductivity, fuel cell development and solar energy development. LANL's fuel cell research, in fact, is the second-longest-running program at the lab. He described some of the detailed research projects in fuel cell technology. In superconductivity, the lab is looking at ways to move the technology from the laboratory to scaled-up manufacturing processes. In solar power, he said that one hour of sunlight provides the earth with all the energy it uses in a year, but getting that energy directly from the sun presents an energy conversion dilemma. Conversion technologies need to be made more efficient in order to exploit all the energy the sun produces, he said. "Carrier multiplication" is the technology that LANL is working on in the area of nanotechnology to accomplish that goal. LANL discovered that quantum dots can multiply the number of electrons discharged by one photon of sunlight. In this kind of research, LANL is working to make capabilities more aligned with the energy problem.

Questions from the committee addressed:

- the effect of dust on magnetic levitation;
- fusion energy research;

- the role of nuclear energy;
- the efficiency of solar collection in photovoltaics;
- improved efficiency in coal-fired power plants;
- carbon dioxide sequestration;
- "energy density" compared to "power density";
- the rail gun;
- the hydrogen storage center at LANL;
- collaboration between LANL and scientists at New Mexico universities;
- partnerships with New Mexico's oil industry;
- the effect of state tax incentives on work at LANL;
- the efficiency of energy-consuming appliances;
- the relationship of energy research and defense research to medical care; and
- the current temperature of high temperature superconductivity.

Kit Carson Electric Cooperative Alternative Energy Plan

Luis A. Reyes, Jr., CEO of the Kit Carson Electric Cooperative, told the committee that the cooperative is a member-owned propane/electric cooperative serving 27,500 customers in Taos, Colfax and Rio Arriba counties. Its propane business is the largest propane dealer in the state, serving 3,500 customers. The cooperative also sells Wildblue satellite internet access services and brings economic development with call centers totaling over 700 jobs. The cooperative provides renewable energy options ranking first in New Mexico and fourth in the region in renewable energy services. He said that the obstacles to providing more and better renewable energy service options are:

- the contract with the wholesale power provider;
- technology interconnect issues;
- code regulations;
- economies of scale;
- the lack of buy-in by the state; and
- environmental obstacles to harvesting material from the national forests.

Questions and discussion addressed:

- quality of the water coming from fuel cells;
- regulations affecting the cooperatives; and
- cooperative memberships' interest and commitment to diversification.

The committee adjourned at 3:11 p.m.